

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KATSUMI ADACHI, ETSUJI YANO and KYOKO KURUSU

Appeal No. 1999-2097
Application No. 08/621,988

ON BRIEF

Before ABRAMS, FRANKFORT, and CRAWFORD, Administrative Patent Judges.
ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-7 and 10-13, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellants' invention relates to a method for producing a stator of an alternating current dynamo-electric machine. An understanding of the invention can be derived from a reading of exemplary claim 1, which appears in the appendix to the appellants' Brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Barrett	3,802,066	Apr. 9, 1974
Licata <u>et al.</u> (Licata)	4,365,180	Dec. 21, 1982
Huang <u>et al.</u> (Huang)	5,592,731	Jan. 14, 1997 (filed Oct 21, 1994)
Japanese Patent Publication ¹	52-34301	Mar. 16, 1977

Claims 1-7 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Japanese reference in view of Huang and Barrett.

Claims 10-13 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Japanese reference in view of Huang, Barrett and Licata.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the Answer (Paper No. 14) and the final rejection (Paper No. 11) for the examiner's complete reasoning in support of the rejections, and to the Brief (Paper No. 13) and Reply Brief (Paper No. 15) for the appellants' arguments thereagainst.

¹ PTO translation enclosed.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

The appellants' invention is directed to a method for producing an alternating current dynamo-electric machine, such as the alternating current generators for automobiles. Such devices comprise, inter alia, a stator core and a stator coil installed on the core. The improvement provided by the appellants' invention simplifies the assembly of the core and the coil. As manifested in claim 1, the inventive method comprises the steps of laminating a plurality of magnetic strips together to produce a laminated core assembly with a regular parallelepiped shape having a plurality of slots, disposing a generally flat-shaped coil assembly in the slots, and bending the laminated core assembly together with the stator coil assembly to produce a cylindrical stator.

This claim stands rejected as being unpatentable over the combined teachings of the Japanese publication, Huang and Barrett. Although not succinctly set forth, it appears to be the examiner's opinion that the Japanese reference discloses all of the subject matter recited in the claim except for the step of disposing a generally flat-shaped stator

coil assembly in the slots of a flat laminated core assembly, which is taught by Barrett, and then bending the structure into a cylindrical shape, which is disclosed in Huang.

The guidance provided by our reviewing court for evaluating a rejection under 35 U.S.C. § 103 is that a prima facie case of obviousness is established when the teachings of the prior art itself would appear to have suggested the claimed subject matter to one of ordinary skill in the art. See, for example, In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir.1993).

The method disclosed in the Japanese reference includes laminating a plurality of magnetic strips together in the manner of the appellants' claim 1 and then forming this flat rectangular parallelepiped assembly into a cylindrical form. Although not so stated, it is apparent that the coil assembly is installed upon the core after the bending operation. This is exactly what the appellants wish to avoid, and is not what is required by claim 1. It should also be noted that the method set forth in the Japanese reference includes placing a bending rod (10) in each of the slots (3) in the stator core assembly prior to the bending step, which are grasped by the bending machine to effect the bending, whereafter they are removed.

In the Huang method, the stator core is comprised of a plurality of arcuate segments that are formed into a cylinder. While it is true that the stator coil assembly is wound in place upon the stator core prior to it being formed into its cylindrical shape, contrary to the

impression given by the examiner, Huang does not bend a flat core assembly into a cylindrical shape, but forms a cylinder from a plurality of preformed arcuate segments (column 5, line 47 et seq.) (see Figure 6).² Therefore, the examiner's contention that Huang "teach[es] the technique of assembling windings onto elongated core structure and then bending that core structure into its ultimate circular shape" (final rejection, Paper No. 11, page 2, emphasis added) is not correct.

Barrett has been cited for teaching that both wound in place and preformed stator coils are known in the art.

We fail to perceive any teaching, suggestion or incentive which would have led one of ordinary skill in the art to modify the method disclosed in the Japanese reference by installing the stator coil, whether wound in place or preformed, upon the flat core prior to bending the core into a cylindrical shape. We arrive at this conclusion for several reasons. First, there is no teaching in the applied references of bending a flat element to a curved configuration after a coil or the like has been installed upon it, much less doing so with the elements of a rotating electric device. Second, to do so with the method disclosed in the Japanese reference would necessitate placing the stator coil in the same slots in which the bending rods must be placed, thus making it impossible to carry out the bending process

²In passing, we note that Figure 4b illustrates what appears to be a single, long flat element. However, nowhere in the patent is the use of flat elements mentioned and it is not stated in column 8, where Figure 4b is explained, that it is anything other than curved.

that forms the crux of the invention disclosed in the reference. This, in our view, would be a disincentive to the artisan to modify the method as proposed by the examiner. Finally, the mere fact that both wound in place and preformed stator coils are known in the art does not, in and of itself, suggest to one of ordinary skill in the art that it would be advantageous to utilize preformed coils in the stator of the Japanese reference or, for that matter, that preformed coil assemblies would be suitable for such use.

It is our conclusion that the only suggestion for combining the teachings of the references in the manner proposed by the examiner is found in the luxury of the hindsight afforded one who first viewed the appellants' disclosure. This, of course, is not a proper basis for a rejection under 35 U.S.C. § 103. In re Fritch, 972 F.2d 1260, 1264, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). This being the case, the teachings of the applied references fail to establish a prima facie case of obviousness with regard to the subject matter recited in independent claim 1, and therefore the rejection of this claim will not be sustained. It follows that we also will not sustain the rejection of claims 2-7, which depend from claim 1.

Consideration of the teachings of Licata, which was cited against dependent claims 10-13, fails to alleviate the problems in the rejection of the independent claim which were set out above. The rejection of claims 10-13 is not sustained.

SUMMARY

Neither rejection is sustained.

The decision of the examiner is reversed.

REVERSED

NEAL E. ABRAMS
Administrative Patent Judge

CHARLES E. FRANKFORT
Administrative Patent Judge

MURRIEL E. CRAWFORD
Administrative Patent Judge

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